

holes to form a female thread in each hole, and threadably implanting an anchor into each tapped hole, thereby creating reference points located precisely with respect to the patient's spine,]

(a) forming concave surfaces in [the endplates] of confronting vertebral bodies [adjacent spinal bone], and

(b) inserting between the formed [bone] concave surfaces [a vertebral] an intervertebral disc endoprosthesis, [including] comprising:

(1) confronting concavo-convex supports, each support having an exterior convex surface adapted to mate with [the adjacent] one of the formed concave [spinal bone surface] surfaces, [the endoprosthesis further including] and

(2) a resilient body interposed between the concavo-convex supports, such that the supports are capable of movement relative to the resilient body element after the endoprosthesis has been inserted between the formed concave surfaces [, and thereafter affixing the concavo-convex supports to the adjacent bone].

8. (Twice Amended) A method of spinal surgery comprising: [the steps of]

forming mounting holes in one or more vertebral bodies of a patient's spine;  
utilizing said mounting holes to mount a bone mill on [a] the patient's spine;  
milling confronting bone surfaces on and in the patient's spine to a  
predetermined surface shape;

removing said mill; and [thereafter]  
mounting [a vertebral] an intervertebral disc endoprosthesis having a  
predetermined outer surface shape [by means of the original mounting holes] so that  
outer surfaces of the [vertebral] intervertebral disc endoprosthesis mate [precisely]

with the previously milled bone surfaces and are capable of motion relative to each other.

*Sub C2*

9. (Twice Amended) A method of endoprosthetic [discectomy] surgery comprising: [the steps of] receiving information about the size, shape, and nature of a patient's involved [and proximate normal] natural spinal vertebral bodies and natural spinal vertebral discs from [known] imaging devices, [thereafter constructing at least vertebral disc endoprosthesis comprising a resilient disc body and concaval-convex elements at least partly surrounding the resilient disc body,]  
*CN*  
*B2*  
removing at least the involved, damaged natural spinal [discs] disc material from the patient's spine,  
forming concave surfaces in adjacent spinal [bone] vertebral bodies, and [thereafter]  
implanting into the patient's spine [the vertebral] an intervertebral disc endoprosthesis comprising a resilient disc body and concaval-convex elements that at least partly surround, and are thereafter capable of movement relative to, the resilient disc body [in the patient's spine].

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143<sup>1</sup> / 16. (Amended) A method of surgery comprising:

*B3*  
(a) forming concave surfaces in the endplates of confronting vertebral bodies, and

(b) inserting between the formed concave surfaces an intervertebral disc endoprosthesis, comprising:

- (1) confronting concaval-convex supports, each support having an exterior convex surface adapted to mate with one of the formed concave surfaces,
- (2) a resilient body interposed between the concaval-convex supports, and
- (3) a fluid-tight seal member surrounding the resilient body.

1479 ✓19. (Amended) A method of surgery comprising:

- (a) forming concave surfaces in the endplates of confronting vertebral bodies, and
- (b) inserting between the formed concave surfaces an intervertebral disc endoprosthesis, comprising:
- (1) confronting concaval-convex supports, each support having an exterior convex surface adapted to mate with one of the formed concave surfaces,
- (2) a resilient body interposed between the concaval-convex supports, and comprising a gasket and nucleus.

Please add the following new claims:

20. The method of surgery according to claim 9, wherein the concaval-convex elements are adjacent to the resilient disc body.

21. The method of surgery according to claim 20, wherein the concaval-convex elements are in contact with the resilient disc body.